

**IDENTIFICATION OF ACCIDENT CAUSING FACTORS  
THROUGH DETAIL ANALYSIS OF ROAD ACCIDENT  
RECORDS IN SRI LANKA**

H.H.K.S. Nandana



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Master of Engineering in Highway and Traffic Engineering

Department of Civil Engineering

University of Moratuwa

Sri Lanka

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Thesis/Dissertation submitted in partial fulfillment of the requirements for the Master of  
Engineering in Highway and Traffic Engineering

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## Declaration of the Candidate and Supervisor

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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## ABSTRACT

Road traffic accidents in a country are inevitable and these accidents can be caused due to several different factors. They can vary from place to place and time to time and are in no particular order: excessive speed, inattention, fatigue, alcohol/drugs, behavior, vehicle defects, weather, road environment, road design etc.

The study involved review of police accident records in police divisions to identify the contributing factors that led directly to the accident, through detail analysis of road accidents. Accident records (More than 200 accident records) were obtained from various police divisions of the country particularly in 2013 and 2014 for a selected week. The collection and use of accurate and comprehensive data related to road accident is very important to road safety management. Detail analyses of accidents were conducted by thorough examination of all elements contributing to the accident, resulting in a well-founded explanation of the series of events which occurred based upon the factual data. Its objectives were to determine; what happened?, where the accident occurred?, when the accident occurred?, why the accident occurred?, and who was involved?.

Precipitating and contributory factors were identified is based on the report of police officers collecting data at the scene using their best judgment from evidence gathered after the accident. However, certain information is not reported in the summary sheet prepared for accident reporting. Inevitably some factors may be harder to determine and it is difficult to attribute a single precipitating factor to one participant in the accident.

Human factors are supposed to be the leading contributory factor in accident analysis and road and environmental factor were found to have a potential effect on road crashes whilst vehicle factor makes the lowest impact compared to the human factor and road and environmental factors. The visibility, geometry, lane markings, surface condition and street lighting facilities, weather, have a potential influence on the drivers and react in a dynamic driving condition. The interaction of the road and environment is quite complex with driving behavior and performance.

Key words: Traffic accident; Contributing factor; Precipitating factor

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## LIST OF ABBREVIATIONS

Abbreviation	Description
RTA	Road Traffic Accident
PSV	Parked & Stationery Vehicles



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